

June 16, 2022

U. S. Department of Transportation
Docket Management System
1200 New Jersey Ave. SE
Washington, DC 20590

Subject: EOS Aerial Petition for Exemption Pursuant to 49 USC Section 44807 to Authorize Aerial Photography and Cinematography Services with UAS Weighing 55 Pounds or More

To Whom It May Concern,

Pursuant to 49 USC Section 44807, EOS Aerial, LLC. ("EOS"), hereby applies for a Grant of Exemption from the Federal Aviation Regulations ("FARs") identified below to allow to allow EOS to operate uncrewed aircraft systems ("UAS") weighing over 55 pounds but no more than 75 pounds, for aerial photography and cinematography operations.

The proposed operation in this Petition for Exemption are similar to those currently conducted by EOS Aerial with small UAS under Part 107, and operations that were commonly authorized under 333 closed set operations. The only difference between the operations proposed herein and EOS's existing operations is that the proposed operation will involve the use of UAS weighing more than 55 pounds, and therefore the operation cannot be conducted under Part 107.

The relief requested in this Petition is identical, except for the drone being used, to Exemption No. 18966 granted to A-Cam Aerials, LLC. ("the A-Cam Exemption") that allows the use of a PIC that holds a Part 107 remote pilot certificate, rather than an airline transport, commercial, private, recreational, or sport pilot certificate to fly a UAS weighing over 55 pounds but no more than 75 pounds. Further information is provided in the EOS Concept of Operations.

In support of this Petition for Exemption, EOS will submit the following associated UAS operating documents:

- EOS Training Program;
- EOS Operations Manual;
- EOS Safety Management System;
- EOS Emergency Response Plan;
- EOS Communications Guide;
- EOS Concept of Operations ("CONOPS"); and
- EOS Operational Risk Assessment.

These documents will be submitted on a confidential basis under separate cover pursuant to 14 C.F.R. § 11.35(b), as the documents contain confidential commercial and proprietary information that EOS has not and will not share with others. The information contained in this

material is not generally available to the public and is protected from release under the Freedom of Information Act, 5 U.S.C. § 552 *et seq.*

I. Background of Petitioner and Description of Proposed UAS Operations

As a joint venture of locationpictures.com and scout911.com - EOS Aerial offers so much more than just standard aerial cinematography. With over 25 years of experience sourcing the most stunning locations and exclusive properties for their clients, EOS Aerial has the experience and connections to get clients the right location to achieve beautiful aerial images. EOS is currently using sUAS to take commercial photographs and film video nationwide. EOS is performing these operations under part 107, and a number of waivers and certificates held by its primary RPIC. EOS members have over 1,000 commercial credits. It is EOS's intent to fly UAS weighing over 55 pounds but not more than 75 pounds for aerial photography and cinematography purposes.

The EOS business model is as a service provider for commercial productions for photography, video, and film. A custom UAS is capable of carrying a larger array of cinema cameras with a larger variety of lenses. This provides production companies, directors, and clients a larger choice of shooting platforms. UAS can be more cost effective and are capable of flying lower and closer to subjects without creating a lot of rotor wash while maintaining a high degree of safety compared to many other aerial platforms.

In accordance with 14 C.F.R. § 11.81(a), the contact information for Petitioner is as follows:

EOS Aerial, LLC
c/o: Thomas Kenji Sugahara
PO Box 5046
Salem, OR 97304

II. Public Interest

For the following reasons, granting the requested relief in this petition would be in the public interest:

1. EOS's intent is to fly UAS to obtain photographs and video at the request of commercial and governmental entities. By using high end video and photographic cameras, EOS will provide customers with high-quality media that can only be produced by specialty cameras. sUAS under 55 pounds are limited in the types of cameras and lenses that can be carried. Using UAS will help clients achieve monetary savings and obtain footage from lower altitudes than what can be safely obtained using helicopters.
2. The enhanced safety achieved using an uncrewed aircraft with the specifications described in this petition, as opposed to the much larger, traditional aircraft carrying fuel and crew or passengers, is safer and exposes workers and other people on the ground to significantly less risk. Additionally, EOS's UA uses batteries which are not as flammable and explosive as 100LL or Jet A fuel. If there was an emergency where the UA

crashed, there is a significantly lower chance of individuals being injured from an explosion or fire.

3. Traditional aircraft availability and scheduling are becoming increasingly difficult and costly for EOS's customers. Pilot shortages, aircraft shortages, and driver shortages are increasing. Production companies are finding it difficult to obtain economical services. EOS's UAS services are in the public interest by increasing service providers and alleviating a pilot and service shortage.
4. Traditional airplanes and helicopters produce significant noise pollution that disrupt the public's ability to enjoy both private and public property. UAS are much quieter and will not disrupt the public as much as traditional aircraft; thus, the public will benefit from a reduction in noise pollution.

III. Description of UAS

EOS has multiple airframes that it is currently utilizing or planning to utilize for aerial cinematography operations. The dimensions and physical characteristics of the Freefly Alta-X UAS are as follows:

Freefly Alta-X

Flight Controller: PX4 based on 1.9 running on a Cube Black (referred to as PX4 in all documents)

Manufacturer: Freefly Systems

Utilization: This is the airframe that EOS is currently conducting aerial cinematography operations with.

Airframe type: Quadcopter Multirotor

Airframe weight: 22.9 pounds

Motors: 4x DJI E7000 motors with a total combined max thrust of 186 pounds (Hobbywing X9 motors will have a combined max thrust of 169 pounds)

AUW: Less than 55 pounds. Payload and batteries changed to stay under 55 pounds per Part 107.

Wheelbase: 55.7 inches, rotor to rotor

The following components and safety systems are standard:

PX4 1.9 based flight controller on a Cube Black— Introduced in 2009, the PX4 autopilot is one of the industry standard flight controllers for heavy lift UAS. A mature product, the cube platform has thousands of hours of flight time. PX4 is one of the world's leading autopilot systems.

The PX4 autopilot installed in the Alta-X has a triple redundant, temperature controlled, 3-axis inertial measurement system with 2 sets being mechanically vibration isolated; a GNSS and magnetometer (compass) network; and a barometric pressure sensor for detecting aircraft altitude.

DJI E7000 Electronic Speed Controllers – Spark proof circuitry extends life of connectors and makes them more reliable. A back up throttle system automatically activates if the primary throttle line is interrupted. (This petition also covers a new revision of the Alta X that utilizes the Hobbywing X9 Motors)

Frsky HORUS X10 with RFD900 – aircraft controls are transmitted using 900 Mhz technology. A high-speed processor chooses the best channel and bandwidth for both aircraft controls based on distance and electromagnetic environment. The RFD900 provides additional telemetry that provides real-time information such as battery voltage and cell voltage.

FPV Camera – a first-person view camera is mounted on the Alta-X to allow the RPIC to view what is in front of the UAS independent of the feed from the payload camera. This augments the tripod mounted ground station tablet to supplement awareness of the RPIC.

ALTA QGroundControl Software – The QGroundControl ground station software has been in use since 2009 having gone through multiple versions which have increased stability and functionality. QGroundControl allows users to input maximum distances and maximum altitudes that the UAS can fly from the take-off location. Telemetry is provided real-time to the ground station including location altitude, speed, distance from take-off location, heading, battery voltage, flight mode, GPS lock, control and data signal strength, and other information.

Geofencing – QGroundControl's geofencing prevents the exit of a predefined area and/or altitude. When enabled, the UAS will not exit a geo-fenced area even with manual or automatic inputs by the RPIC.

Emergency flight termination – The PX4 flight controller enables emergency flight termination using a controller sequence that cuts power to all motors. The Alta X will also have a separate Flight Termination System operating on a frequency band separate from the operating frequency of the C2 link.

Return to Home (RTH) – the PX4 controller supports RTH or immediate land through a controller sequence or when control signal is lost by the UA. If RTH is enabled, QGroundControl allows the setting of a RTH altitude.

IV. Regulations from which Exemption is Sought

EOS seeks an exemption from the following interrelated provision of CFR Parts 61 and 91:

FAR	Description
§61.3(a)(1)(i)	Pilot Certificate
§91.7(a)	Civil aircraft airworthiness
§91.109(a)	Dual Controls
§91.119(c)	Minimum safe altitudes: General.

§91.121	Altimeter settings.
§91.151(b)	Fuel requirements for flight in VFR conditions.
§91.403(b)	Maintenance
§91.405(a)	Maintenance required.
§91.407(a)(1)	Operation after maintenance, preventative maintenance, rebuilding, and inspections.
§91.409(a)(1) and (a)(2)	Inspections
§91.417(a) and (b)	Maintenance records.

Listed below are the specific Federal Aviation Regulations (“FAR”) sections from which an exemption is sought, the rationale for why an exemption is needed, and a brief summary of the operating procedures and safeguards, which are described more fully in the operating documents being submitted under separate cover, which will ensure that the proposed operations can be conducted at a level of safety that is at least equal to that provided by the rule from which exemption is sought. For ease of review, this section divides the FARs from which exemption is sought into two main categories: (1) FARs pertaining to the UAS, and; (2) FARs pertaining to UAS Operating Parameters.

To expedite the FAA’s safety assessment of the proposed UAS operations, except where explicitly noted in the CONOPS, EOS agrees to conduct the proposed operations in accordance with the same applicable conditions and limitations (“Limitations”) included in the A-Cam Exemption. The only difference is the approved UAS.

A. FARs Pertaining to the Uncrewed Aircraft System

§ 91.405(a) Maintenance required

§ 91.407(a)(1) Operation after maintenance, preventive maintenance, rebuilding, or alteration

§ 91.409(a)(1) and (2) Inspections

§ 91.417(a) and (b) Maintenance records.

§91.109(a) Dual Controls

EOS seeks an exemption from the following maintenance and inspection-related FARs: §§ 91.403(b) *Who may perform maintenance*, 91.405(a) *Maintenance required*, 91.407(a)(1) *Operation after maintenance, preventive maintenance, rebuilding, or alteration*, 91.409(a)(1) and (2) *Inspections*, and 91.417(a) and (b) *Maintenance records*. These regulations specify maintenance, inspection, and records standards in reference to FAR § 43.6. An exemption from these regulations is needed because Part 43 and these sections only apply to aircraft with an airworthiness certificate, which the UAS to be operated under this exemption will not have, and because compliance with these regulatory provisions in the context of UAS operations is not feasible.

An equivalent level of safety will be achieved because maintenance, inspections, and records handling will be performed in accordance with the manufacturer's manual, any required manufacturer safety or service bulletins, and the A-Cam Exemption Limitations. Under the Limitations, for example, the PIC will conduct a pre-flight inspection of the UAS and all associated equipment to account for all discrepancies and/or inoperable components.

Maintenance will be performed and verified to address any conditions potentially affecting the safe operation of the UAS, and no flights will occur unless and until all flight critical components of the UAS have been found to be airworthy and in a condition for safe operation. A functional test flight will also be conducted in a controlled environment following the replacement of any flight critical components, and, as required by the operating documents, the PIC who conducts the functional test flight will make an entry in the UAS aircraft records of the flight. Functional flight tests will not involve the carriage of hazardous materials and the vehicle will have an all-together weight below 55 pounds during flight testing. In addition, the operator will be required to follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the UAS and its components. Along with the preflight checklists, EOS Pilot Training Program, and a routine maintenance program, EOS believes an equivalent level of safety is met, and that equipment at risk of failure can be safely identified before flights occur.

Maintenance, preventive maintenance, rebuilding, and alterations will be performed by EOS using the methods, techniques, and practices prescribed in the current manufacturers' maintenance manuals. This maintenance will be performed by qualified individuals whom the manufacturer has trained in proper techniques and procedures for these UAS, as described in their applicable operating documents. The operator will record all maintenance performed on the aircraft, including a brief description of the work performed, date of completion and the name of the person performing the work. EOS personnel who have received maintenance training and signoff authority from the manufacturer, including all EOS pilots who operate the Alta X, will conduct simple prescribed maintenance, preventive maintenance and replacement. Major, difficult or complex maintenance, preventive maintenance, and alterations may be performed in consultation with Freefly or by the manufacturer itself.

In the A-Cam Exemption, the FAA determined that the proposed UAS operations required exemption from FAR §§ 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), and that the achievement of an adequate level of safety required certain conditions and limitations. EOS has proposed in this Petition a number of Limitations related to maintenance, inspections, and records which it believes provide a level of safety at least equivalent to that provided by FAR §§ 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b). For this reason, and consistent with the exemption granted from these sections in the A-Cam Exemption, EOS requests an exemption from these sections subject to the A-Cam Exemption Limitations, without having to perform the inspections and maintenance items required by FAR §§ 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b).

B. FARs Pertaining to Uncrewed Aircraft System Operating Parameters

§ 91.7(a) Civil aircraft airworthiness

Inasmuch as there will be no airworthiness certificate issued for the UAS, EOS seeks an exemption from FAR § 91.7(a) Civil aircraft airworthiness, which requires that a civil aircraft be in an airworthy condition to be operated. While the UAS operated by EOS will not have an airworthiness certificate, consistent with the FAA's determination in the A-Cam Exemption, the pilot may determine the UA is in an airworthy condition prior to flight. As described more fully in the operating documents, this is achieved through adherence to EOS's routine pre-flight checklist regularly scheduled maintenance, and the enhanced pilot training requirements of the EOS Pilot Training Program.

§ 91.119(c) Minimum safe altitudes

EOS also seeks an exemption from FAR § 91.119(c) Minimum safe altitudes, to the extent necessary to allow UAS operations over closed set or sparsely populated areas at altitudes lower than those permitted by rule. The ability to operate at those altitudes is one of the key benefits of using UAS for the proposed activities. An equivalent or greater level of safety will be achieved given the size, relatively light weight, and slow speed of the UAS, as well as the controlled location where the operations will occur.

As described in the operating documents, EOS operations will be limited to 400 feet AGL or otherwise authorized by a COA issued by ATO. In the closed set or sparsely populated environments where EOS operations occur, flying at or below authorized altitudes increases the aircraft's efficiency, without posing any increased risk to people or property. Even at these low altitudes, EOS's UAS operations will be conducted at a level of safety equal to or greater than that achieved by a larger traditional aircraft performing similar activities at the altitudes required by FAR § 91.119.

§ 91.121 Altimeter settings

EOS also requests an exemption from FAR § 91.121 Altimeter settings, which requires a person operating an aircraft to maintain cruising altitude or flight level by reference to an altimeter that is set to the elevation of the departure airport or barometric pressure. In the A-Cam Exemption, the FAA stated that an equivalent level of safety to the requirements of FAR § 91.121 can be achieved in circumstances where the PIC uses an alternative means for measuring and reporting UA altitude, such as global positioning system (GPS). The UAS that EOS intends to use for performing the proposed operations will be equipped with GPS or other equipment for measuring and reporting UAS altitude, and the PIC will check the UA altitude reading prior to each takeoff, effectively zeroing the UA's altitude at that point. Consistent with previously granted exemptions, these requirements ensure that an equivalent level of safety will be achieved, and an exemption from the requirements of FAR § 91.121 is therefore appropriate.

§ 91.151(b), Fuel requirements for flight in VFR conditions

Finally, EOS seeks an exemption from FAR § 91.151(b) Fuel requirements for flight in VFR conditions, which would otherwise require a 20-minute fuel reserve to be maintained. The FAA has previously determined that a requirement prohibiting the PIC from beginning a UAS flight unless (considering wind and forecast weather conditions) there was enough available power for UAS to operate for the intended operational time and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater would ensure an equivalent level of safety to the fuel requirements of FAR § 91.151. See the A-Cam Exemption at pg. 15. EOS will adhere to the same reserve power requirement and an exemption from FAR § 91.151's fuel requirements for flight in VFR conditions is therefore appropriate.

V. Pilot Certification

As previously noted, the proposed operations under this exemption request are similar to those authorized in the A-Cam Exemption. The first similarity revolves around the issue of pilot certification. Before the A-Cam Exemption, which was granted after the creation of the remote pilot airman certificate, the PIC was required to hold either an airline transport, commercial, private, recreational, or sport pilot certificate. Prior to Part 107 becoming effective, this traditional pilot certification requirement was imposed on all UAS operators conducting operations under Section 333 Exemptions because of the statutory requirement in 49 U.S.C. 44711(a)(2)(A) that prohibited a person from serving in any capacity as an airman on a civil aircraft being operated in air commerce without an airman certificate.

Part 107 created a new class of airman certificate tailored to remote pilots (the remote pilot airman certificate). With the creation of this new class of airman certificate, the FAA is no longer bound by the statutory requirement in 49 U.S.C. 44711(a)(2)(A) to require a PIC to hold either an airline transport, commercial, private, recreational, or sport pilot certificate. Instead, the FAA can require that EOS's PIC hold a remote pilot airman certificate, as was done in the A-Cam Exemption, if doing so would not adversely affect safety.

In the Preamble to Part 107, the FAA explained its analysis as to why the certification requirements for traditional aircraft operations are neither necessary, nor appropriate for small UAS flight operations:

Additionally, under current pilot certification regulations, depending on the type of operation, the remote pilot in command of the small UAS currently must obtain a sport, recreation, private, commercial, or airline transport pilot certificate. . . . While these airman certification requirements are necessary for traditional aircraft operations, they impose an unnecessary burden for many small UAS pilots because a person obtains a pilot certificate under part 61 by learning how to operate a manned aircraft. Much of that aeronautical experience/flight training is not applicable to small UAS operations because a small UAS is operated differently than a manned aircraft. In addition, the

aeronautical/flight experience currently necessary to obtain a pilot certificate under part 61 does not equip the certificate holder with all of the tools necessary to safely pilot a small UAS. Specifically, applicants for a pilot certificate under part 61 currently are not trained in how to deal with those aspects of “see-and-avoid” and loss-of-positive-control safety issues that are unique to small uncrewed aircraft. Thus, requiring persons wishing to operate a small UAS to obtain a pilot certificate under part 61 imposes the cost of airman certification on those persons, but does not result in a significant safety benefit because the process of obtaining the certificate does not equip those persons with all of the tools necessary to mitigate the public risk posed by small UAS operations.⁵

For the reasons discussed below, this same rationale espoused by the FAA in the Preamble to Part 107, combined with EOS’s proposed safety mitigations, also supports, as in the A-Cam Exemption, a finding that the proposed operations under the requested exemptions can be conducted without adversely affecting safety.

As in the A-Cam Exemption, EOS operations will be conducted under 14 CFR part 91 rather than under Part 107. While the operations would be conducted under Part 91, EOS proposes that operations would fall under the privileges of a remote pilot in command if this exemption is granted.

While it is true that operations involving UAS weighing 55 pounds or more could raise additional safety concerns than operations involving small UAS, the unique nature of the proposed operations, including the low-risk environments in which the operations will occur, will ensure that safety is not jeopardized. While Part 107 will not apply to the proposed operations, wherever possible, EOS intends to conduct the proposed operations in accordance with Part 107. In addition to compliance with Part 107, EOS’s proposed operations include the following mitigations:

- PIC would hold at least a second-class medical certificate to ensure the pilot does not have any physical or mental conditions that would interfere with the safe operation of the UAS. Additionally, PICs of operations would be prohibited from operations during medical deficiency as prescribed in § 61.53(a), and VOs and other UAS crewmembers would be prohibited from operations during medical deficiency as prescribed in § 61.56(b).
- Following that, all state and local paperwork associated with the operation will be filed before and after operations. At 72 hours before aerial filming, EOS will submit a Plan of Activities to the local Flight Standards District Office with jurisdiction over the area of proposed filming. The contents of the Plan of Activities is as set forth on pages 38-39 of the A-Cam Exemption.
- The PIC will hold a Part 107 remote pilot airman certificate.

⁵ 81 FR 42069 (June 28, 2016).

- Prior to beginning operations, the PIC will take all preflight actions as set forth in its flight manual, which includes a comprehensive preflight checklist. Such actions would include reviewing weather, flight battery requirements, landings, and takeoff distances and aircraft performance data before initiation of flight. The operations would comply with visibility requirements and adherence to minimum distances from clouds. Such requirements ensure the uncrewed aircraft does not operate so close to a cloud as to create a hazard to other aircraft operating in the NAS. The pilot in command would also account for all relevant site-specific conditions in his or her preflight procedures.
- At least one visual observer (VO) will be used for all operations. Both the PIC and VO will maintain a safe distance from the UAS when it is operating as set forth in its flight manual.
- The areas to be flown are closed sets or sparsely populated areas. PIC will first conduct a remote assessment of the flight area. Prior to operations, the PIC and primary VO will conduct a walkthrough of the operating area to the maximum extent possible to ensure lines of sight are clear, marking obstructions, and ensuring visual observers have unobstructed fields of view.
- UAS flights will be limited to a maximum altitude of 400 feet above ground level (AGL) or an altitude authorized by a COA issued by ATO.
- Visual observers and security will ensure the area of operation is clear of all non-participants and any other potential hazards, prior to beginning operations (with UAS weighing 55 pounds or more).
- A small UAS may be used to survey and access the operating environment prior to operations if permitted.

A. EOS's Enhanced Pilot Training and Experience Standards

Through its training program, which requires aeronautical knowledge, experience, and flight proficiency beyond that required by Part 107, EOS will be able to achieve a level of safety equivalent to what would be obtained using a PIC holding an uncrewed pilot certificate under Part 61.

As with the proponents in the [A-Cam Exemption](#), EOS has integrated safety elements into the operation of its UAS, including comprehensive pilot and VO training and certification requirements that establish an equivalent level of safety to operations conducted with a PIC that holds an uncrewed pilot certificate. These requirements include: a comprehensive UAS training course, which includes theory and practical components, a pilot theory exam, supervised flight training, completion of EOS's training and examination program requirements, minimum flight time requirements, demonstrated practical flying ability for the relevant tasks, and continued periodic training after certification.

Aeronautical Knowledge

The following chart addresses each aeronautical knowledge requirement of § 61.125 and explains whether it is relevant to, different from, or addressed by Part 107 operations or A-Cam internal procedures.

§61.125, Aeronautical Knowledge	EOS Operations Under Part 107
(1) Applicable Federal Aviation Regulations of this chapter that relate to commercial pilot privileges, limitations, and flight operations;	Addressed by Part 107
(2) Accident Reporting	Addressed by Part 107
(3) Basic aerodynamics and the principles of flight	Topics applicable to uncrewed aircraft are included in Part 107.
(4) Meteorology	Applicable meteorology principles are covered by Part 107.
(5) Safe and Efficient Operation of Aircraft	Covered by Part 107 and included in EOS training.
(6) Weight and Balance	“Loading and Performance” is addressed by Part 107. EOS will comply with the weight limitation exemption and will ensure that external loads do not negatively impact flight characteristics, as required by Part 107.
(7) Performance Charts	Not directly applicable.
(8) Effects of exceeding aircraft performance limitations	Not directly applicable. Topics applicable to uncrewed aircraft are included in Part 107.
(9) Pilotage and dead reckoning	Not applicable.
(10) Use of air navigation facilities	Topics applicable to uncrewed aircraft are included in Part 107.
(11) Decision making and judgment	Addressed by Part 107
(12) Principles and functions aircraft systems	Covered by Part 107 and by EOS internal procedures and use of operations manuals
(13) Emergency operations	Addressed by Part 107 and by EOS Emergency Response Procedures.
(14) Night and high altitude	High altitude not applicable. Night covered by waiver.
(15) Operating within the national airspace system.	Addressed by Part 107
(16) Lighter than air ratings.	Not applicable.

Flight Proficiency

FAR § 61.127 contains flight proficiency requirements for specified aircraft categories. Part 107 contains no flight proficiency requirements, however to ensure adequate flight proficiency, EOS will require demonstrated multi-rotor proficiency in:

- Preflight preparation;

- Preflight procedures;
- Airport and heliport operations;
- Hovering maneuvers;
- Takeoffs, landings, and go-arounds;
- Performance maneuvers;
- Navigation;
- Emergency operations;
- Special operations; and
- Postflight procedures.

Aeronautical Experience

FAR § 61.129 contains requirements for aeronautical experience that are not required for operations conducted under Part 107. To ensure an adequate level of aeronautical experience, EOS will require its pilots to obtain an appropriate level of aeronautical experience, using § 61.129 as a guide, where applicable and reasonable. Many of the requirements § 61.129, however, are either inapplicable or excessive for EOS's proposed operations. Commercial helicopter ratings require at least 150 hours of flight time. Much of this, however, need not be in a helicopter or as the PIC. Other flight time requirements in Part 61 are cross-country time or instrument time. There is no need for Part 107 remote pilots to obtain time spent in cross-country flight or instrument flight. EOS pilots will spend all of their time flying the make and model of multi-rotor aircraft that will be used in their operations. These aircraft are far less complicated than traditional aircraft. The pilots can, therefore, achieve a comparable level of experience and safety by requiring 100 hours of total flight time of a multi-rotor system as the PIC with at least 10 take-off and landings. This will be required by the operations manual and training program.

B. EOS's Experienced Team

EOS's team is comprised of individuals with significant experience in UAS and this experience will help ensure that the proposed operations do not adversely affect safety:

Jof Hanwright/RPIC

Jof has worked with drones in professional cinema since 2006 accumulating over 2,500 hours of flight time. He has extensive experience developing flight plans of activity as well as permitting with local, state, and federal agencies. His responsibilities include direct coordination with on-scene law enforcement for safety and traffic control procedures during filming. He oversees aircraft readiness and maintenance operations for EOS. Jof also maintains responsibility for establishing and maintaining a system of continuous development and training of flight crews. He has worked with an extensive client list including Apple, Bose, Lincoln, Mercedes, and Tesla among many others.

Sean Rivers- Aerial Director of Photography

Sean is the current Co-Owner/Operator of EOS Aerial, Co-Owner of UltraArmSF and Owner of Unpathed Film. Sean specializes in, motion stabilized cinematography, with an emphasis on drone and camera car vehicle cinematography. He has been shooting from land and air for clients since 2012. As an early adopter to the world of gimbals, Sean is a highly skilled gimbal tech/operator and prides himself on his high standards of work and expertise. He has worked with clients including Bose, Lincoln, Jeep, Lucid Motors, and Verizon among many others.

Eric Braun- Drone Tech

Eric is a co-owner of EOS and is responsible for the technical support of the EOS program. He has extensive experience building, re-building, modifying, designing, and trouble-shooting drones and support equipment. Eric has custom designed and built pilot/camera-operator trays that include multiple video systems, monitors, power systems. He has extensive experience with all sizes of drones from sub 250g FPV drones to Alta-X and Alta-8 platforms. His knowledge expertise spans a broad range of systems from video systems, ground stations, to software.

VI. Environmental Analysis

EOS is already conducting operations using the specified UAS under Part 107. The only difference between current operations and operations under this exemption will be the AUW of the aircraft. Operations occur in many different locations, many potential impacts are already regulated by other Federal statutes, and the UAS uses an electrical powerplant. As noted in FAA-2018-1087-0971, Final Rule allowing Operation of Small Unmanned Aircraft Systems Over People and at Night, Documentation Supporting Application of Categorical Exclusion,

[T]he proposed action will not involve land acquisition; physical changes to the environment resulting from ground disturbance or construction activities; changes in patterns of population movement or growth, increases in public service demands, or business and economic activity; or generation, disturbance, transportation, or treatment of hazardous materials.

Likewise, this application as envisaged by this petition will not involve any impacts as outlined in FAA-2018-1087-0971. We request that the FAA apply a categorical exclusion to the proposed operations.

VII. Federal Register Summary

Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the FEDERAL REGISTER, should it be determined that publication is needed:

Petitioner seeks an exemption from the following rules in Title 14 of the Code of Federal Regulations:

61.3 (a)(1), 91.7(a), 91.119(c), 91.121, 91.151(b), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), 91.417(a) and (b).

VIII. Conclusion

For the foregoing reasons, EOS respectfully requests that the FAA grant this Petition for Exemption. Should you have any questions, or if you need additional information to support EOS's Petition, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to be 'TK Sugahara', written in a cursive, stylized font.

Thomas Kenji Sugahara
On behalf of EOS Aerial, LLC